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US 4903991 A   US 3950013 A   US 3829133 A

(58) Field of search
UK CL (Edition K) B6A AK AL ATC
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(54) **Credit or phone card**

(57) A credit or phone card (10) has two items (12, 14) of information, one (12) initially readable and the other (14) initially unreadable, the store (10) being provided with means (16) operable by the user in an irreversible manner to render said other item (14) readable, the two items (12, 14) related to each other in a verifiable way that requires machine-stored information not on said card (10). The two items comprising e.g. digits are read through a telephone to a computer which verifies the relationship and then allows limited access to a facility whose value is deducted from a value stored in the computer corresponding to the purchase price of the card (10).

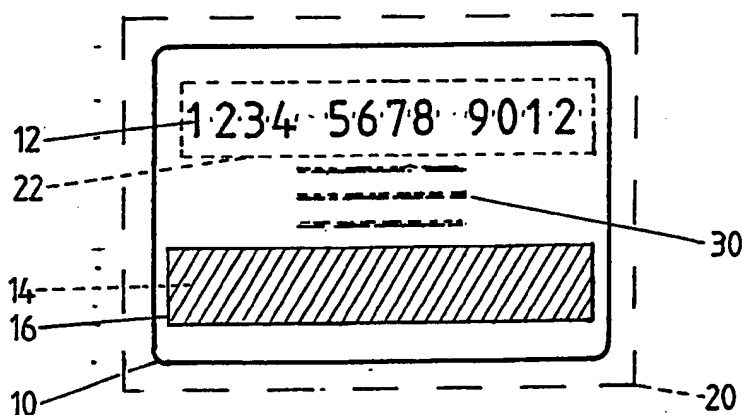The means (16) may be a scratch-off coating or the removal of a sealed envelope.
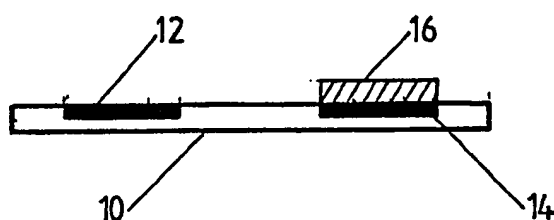

Fig. 2

Fig. 3

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1234 5678 9012 — 28

1234 5678 9012 — 12

1965 0913 9876 — 14

— 10

Fig. 1

1234 5678 9012 — 12

22

30

14

16

10

20

Fig. 2

12   16

10   14

Fig. 3

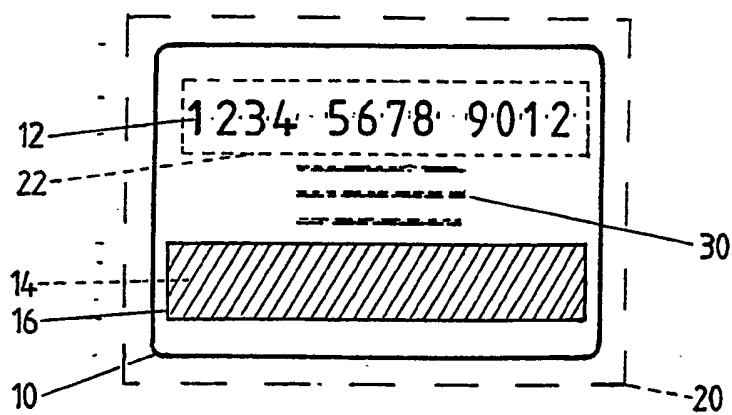112 312 512 412 114   18

212   612   214

24

36

32

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10
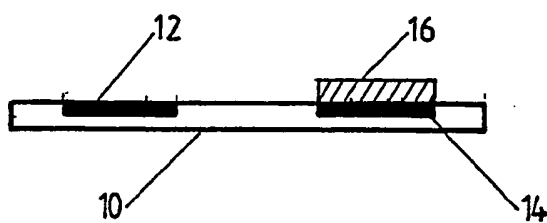
34
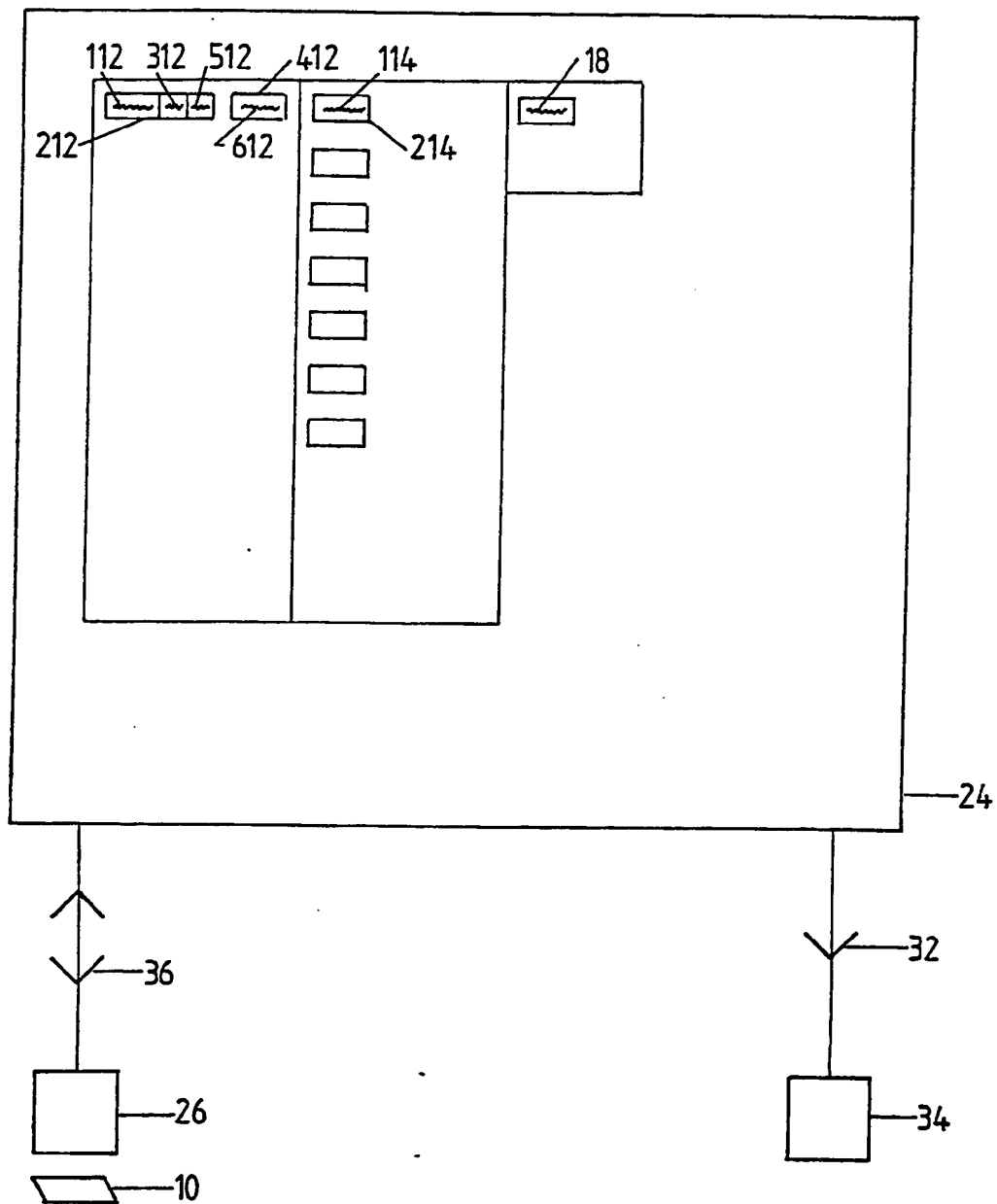
Fig. 4

TITLE

"IMPROVEMENTS IN AND RELATING TO CARDS AND LIKE

INFORMATION STORES"

FIELD OF THE INVENTION

This invention relates to cards and like information

stores, systems comprising such stores, and computers

included in such systems for use with such stores.

BACKGROUND TO THE INVENTION

A number of different types of system are known that

utilise cards that are carried by the user. One example

is the credit card that carries a visible number (often

also encoded in a magnetic strip on the card) and a

signature. For a purchase transaction, the vendor copies

the number (by hand or by machine-reading the encoded

number) onto a voucher and obtains the user's signature

on the voucher, which is then dispatched to a centre

where all such vouchers for that card number are recorded

against a relevant user account which is debited for them

accordingly.

Another example is a telephone card which is

purchased for a fixed sum of money and represents a

predetermined number of telephone call timing units, but

has no individual number made use of by the system of

which it is part. It is used by being inserted into a

telephone apparatus which automatically cancels it unit

by unit as telephone calls progress.

Whereas the credit card can be used indefinitely,

regardless of transaction values (apart from any overall credit limit on the relevant account), the telephone card has a life limited to the number of units purchased.

Another type of card is the lottery card, either
5   .given away with purchases or itself purchasable. This has either a single item of information that is initially unreadable (e.g. when the card is acquired by the user) and is rendered readable in an irreversible manner by the user, e.g. by scraping off a coating over the number or
10 by opening an opaque envelope containing the card, or has two items of information both similarly initially unreadable, one of them adapted to be rendered readable by the user in an irreversible manner while the other (according to rules of use of the card) must be not
15 rendered readable by the user but, after the card has been returned to a centre with a claim to the prize or value indicated by the card, is intended to be rendered readable at the centre to verify that the card has not been falsified, the two items of information being
20 related to each other.

THE INVENTION

The present inventor has devised a card and a system using the card that enable improved security, extra facilities, further control and other advantages.
25 According to the invention there is provided a card or like information store as claimed in claim 1. This will usually be in the form of a card, but could be in

any other convenient form to be carried around by the

user or again might be printed in a book or on the carton

of an article purchased, e.g. to enable the purchaser of

the article or book to have access to a range of

5   facilities, e.g. up to a predetermined value. The

provision of an initially readable item of information

will enable the final vendor of the card or any person

from the manufacturer onwards who has provided the card

to identify that particular card, which information may

10   be used for security purposes, e.g. so as to allow only

those cards which have been purchased bona fide to be

enabled for use by the user. The provision of the

initially unreadable item of information and the

provision of means operable by the user in an

15   irreversible manner to render this item readable (e.g. by

scraping off a coating over this item) will ensure that

no person previous to the user is able to make use of the

facilities available in respect of that card without the

user being able to see or otherwise be aware of this and

20   thus will reassure the user that the card when purchased

has the full range of facilities available for which the

user has purchased the card. The relationship of the two

items to each other such that this relationship can be

verified particularly by means not on the card, and more

25   particularly in a manner that requires machine-stored

information not in the card, will enable two functions,

firstly a central processing unit to verify that the two

items of information do indeed correspond and thereupon
to make available the facilities intended by purchase of
the card and secondly to act as a security measure so
that the initially unreadable item of information cannot

5   be deduced from the item of information initially
readable before said means have been operated in an
irreversible manner to render said other item readable.

The card may be used in the following manner, viz.
the two items are read into a terminal connected with a

10   central processing unit having said machine-stored
information and able to verify said relationship in order
to allow said facilities to be provided as aforesaid.
For this purpose, the two items may be adapted to be
humanly readable and the user can, after using a

15   telephone as the terminal to call up the central
processing unit, read the items into the terminal
vocally, by means of a touch-pad carried around by the
user, or by means of keying in the items on the
telephone's own keypad.

20   While said one item may be readable by any method,
e.g. by touch (e.g. in Braille) for a blind person, it
will usually be initially visible to the eye. Said other
item may be initially unreadable by being hidden from
view although it could be on view but unreadable, e.g. by

25   being made of figures interlaced with other figures that
will be removable by the aforesaid irreversible operable
means.

In one preferred form, the hidden item is hidden by means of a coating adapted to be scratched away by the user, having the advantages of minimum trouble to the user and minimum mess afterwards. In another preferred

5 form, the card is placed in an envelope so that said initially unreadable item is hidden by means of the envelope which is adapted to be removed by the user and is arranged to permit said initially readable item to be seen before such removal. In this case, there may be a

10 window in the envelope or said initially readable item may be printed on the outside of the envelope and also repeated inside, on the card. In such case, the term "a card or like information store" herein and in the claims can have reference to the totality of card plus envelope.

15 Particularly, but not exclusively for blind persons, both items may be adapted to be humanly readable by touch. On or both of the items may be provided in this form and in a form readable by sight. It is also possible for a touch-sensitive (or other) reader to

20 provided to the user by the provider of the system utilising the stores, which would make them less useful and available to the casual thief.

The aforesaid relationship by which the two items are mutually related may be by means of respective

25 corresponding information being held in mutually related store fields available to a computer, e.g. at the aforesaid centre. For example, the items may be two

unrelated numbers held in respective store fields available to the computer, the fields being mutually related so that, upon the computer being interrogated with the pair of numbers, it can identify the store field

5 for on of the numbers, identify the related stored field and test whether the other number is that held in the other store field. Again, the two items may be mutually related by an arithmetical relationship, the testing of which required machine-stored information available to

10 the computer, such information being for example an instruction to carry out a series of arithmetical steps, which series may be changeable between one batch of cards and another, the batch being identifiable by the computer from one of the items of information read to it. It is

15 also possible for the items to be related by a non-arithmetical computational relationship, e.g. where one of the items represents arithmetical steps to be applied to the other item to produce a result that can be tested by the computer.

20 For most uses, each of the items will comprise a number c consisting of numerical digits the arrangement of which has a feature to facilitate the number being humanly read and keyed or spoken into a telecommunications device, with a view to reducing the

25 likelihood of human error. A preferred such feature comprises at least one variation in spacing between successive digits, so for example the digits in a said

number may be arranged in groups of three with a space between each group, this grouping being likely to reduce dyslexic misreading of the digits.

The preferred form of the store will be a card
5   substantially the size of a standard credit card, i.e. approximately 8½ x 5½ centimetres.

Credit cards (and other cards for purchasing facilities) known to the present inventor have no instructions on them and require a degree of familiarity
10   on the part of the user. Sometimes instructions are provided on the card-reading machine but these are often worn or vandalised. There is thus a decided advantage if the store itself comprises instructions for use thereof, particularly when the store comprises a member having
15   both of said items and said instructions. Alternatively, with a view to improving security, particularly where instructions may vary from one batch of cards to another, the store may comprise a detachable member bearing instructions for the use thereof, e.g. an envelope
20   adapted to be removed by the user or a part of the card adapted to be broken off.

A system for using any such store as hereinabove described embodying the invention may comprise such a store and a computer adapted to verify the mutual
25   relationship between the two items of information, and inconsequence of such verification to issue an authorisation signal. This signal can then be used to

make available the relevant facilities. The availability
might be entrance past a turnstile, time for using a
facility, e.g. a telephone call or watching television,
or purchase of goods, all of which are only examples.

5   The computer may be adapted to verify the
relationship or part thereof by a computation performed
on at least one of the items of information and/or by
comparing items with respective corresponding information
held in mutually related store fields available to the

10   computer, or by any other method e.g. as indicated above.
The store fields may be contained in a memory of the
computer or may themselves be at some other location
which may be accessible to the computer, perhaps only on
particular conditions or in particular circumstances.

15   One way in which the computer may be used is as
follows. The computer is provided with a store field
available to it corresponding to said one item
information, the initially readable item, and is adapted
to be responsive to receiving initially this item of

20   information or information derived therefrom, read into
it or a terminal connected to it, to enable the computer
in respect of this store field. This initial reception
normally refers to the first time that the user reads
both items of information the computer. The computer may

25   further be adapted so that, concomitantly with this
enabling, it can set up a stored value, e.g. a number of
telephone call units or a total time of television

viewing or a number of turnstile operations or a monetary

value, and it can then change this value (possibly unit

reception and) at least upon each subsequent reception by

the computer of the two items of information or

5   information derived therefrom. Preferably, the computer

will be adapted to issue an authorisation signal on the

occasion of each such change or at least upon each said

subsequent reception in order to allow access to the

relevant facilities. The preferred method of operation,

10   that the system is adapted to use, is for each said

subsequent reception to cause directly or indirectly said

stored value to change towards a predetermined value

(e.g. decrease towards zero) and preferably, upon said

value reaching said predetermined value to disenable the

15   computer in respect of the store field related to the

enabling and discontinue issue of said authorisation

signal. Thus, for example, if the system is set to allow

a certain value of goods to be ordered, e.g. by code

numbers from a catalogue or e.g. Prestel being read to

20   the computer by the user, the stored value (of goods)

available will reduce by the appropriate amount upon each

such order and, upon reaching zero, no further orders

will be available and the user will have to purchase

another card. If the card is machine-readable, it can be

25   retained or destroyed/cancelled by the reading machine

upon the stored value reaching zero.

In particular, the system may be adapted for the

authorisation signal to have the following three effects,

(a) to operate a process subject to selection by the

user, e.g. by choice of the store, choice of the

telephone number dialled by the user, or otherwise, (b)

5   to transmit to the user a signal indicative of a value of

the process, which value may depend upon the occurrence,

quantity, time or otherwise of such process, and (c) to

change the stored value.

According to another aspect of the invention, there

10   is provided a computer adapted to co-operate with a card

or like store as aforesaid embodying the invention. Such

a computer is preferably adapted to verify a

predetermined mutual relationship between two

predetermined items of information such as those of a

15   said store, and in consequence of such verification

preferably to issue an authorisation signal, and

preferably has a store field available to it

corresponding to one of said two items and is adapted to

be responsive to receiving initially this item of

20   information or information derived therefrom, and making

the verification, to enable the computer in respect of

this store field. As before, this initial reception is

preferably the first occasion on which the user reads at

least said one item, and preferably both of said items,

25   to the computer. Further, the computer may be adapted to

set up concomitantly with the enabling a stored value and

to change this value upon (possibly the initial reception

and) at least each subsequent reception by the computer
of the two items of information or information derived
therefrom, as aforesaid. The computer is preferably
adapted to issue an authorisation signal upon (possibly
5 the initial reception and) at least each said subsequent
reception, again for the reasons aforesaid. Preferably,
the computer is adapted for the authorisation signal to
have the three aforesaid effects.

While such a computer will normally be dedicated for
10 this particular purpose, according to another aspect of
the invention there is provided means adapted to co-
operate with a computer (e.g. a general-purpose computer)
to program the computer to act as the computer just
described with any one or more of the aforementioned
15 relevant features.

DESCRIPTION OF THE DRAWINGS

The invention will now be more particularly
described with reference to the accompanying drawings, in
which:-

20 Fig. 1 is a plan view of a card information store
embodying the invention ready for use by the user;

Fig. 2 is a view corresponding to Fig. 1 upon purchase by
the user and before it is ready for use;

Fig. 3 is a cross section on the line 3-3 of Fig. 2; and

25 Fig. 4 is a diagrammatic representation of a system
embodying the invention comprising a card store and a
computer.

Referring to the drawings, an information store in the form of a card 10 has two items 12, 14 of information, one (12) initially readable and the other (14) initially unreadable, the card 12 being provided with means 16 operable by the user in an irreversible manner to render said other item 14 readable, the two items 12 and 14 being related to each other in a verifiable way that requires machine-stored information 18 not in said card 10. The two items 12, 14 are both adapted to be humanly readable, item 12 being initially visible to the eye and item 14 being initially hidden from view. The hidden item 14 is hidden by means of a coating 16 adapted to be scratched away by the user. Alternatively, item 14 may be hidden by means of an envelope 20 adapted to be removed by the user and arranged by means of a window 22 to permit the item 12 to be seen before such removal. The items 12, 14 may also be readable by touch.

In one embodiment, the items 12, 14 are mutually related in a verifiable way for the purposes of the invention by respective corresponding information 112, 114 held in mutually related store fields 212, 214 available to computer 24. Information 112, 114 may be in fact the items 12, 14. Receipt by computer 24 of item 12 enables the computer to identify field 212, perhaps verify that information 112 corresponds to item 12 and to read out information 312 which identifies field 214 which

is thereby related to field 212, though this relationship
may be variable in terms of access for different groups
of cards 10, e.g. issued in different years (allowing
only a limited time within which to use the facilities to

5   be made available by purchase of the card). The computer
then verifies that stored information 114 does indeed
correspond to item 14 read to the computer 24, thus
verifying a relationship between items 12 and 14. Thus,
information 312 is an example of the aforementioned

10   machine-stored information 18.

     In another embodiment, items 12 and 14 are stored as
information 112 and 114 and the computer verifies that an
arithmetical relationship exists between information 112
and 114 in accordance with machine-stored information 18

15   that gives instructions for the necessary computation for
this purpose. In another embodiment, information 18 is
used to effect a computation based on information 112 and
the result is checked with information 114 to verify the
required relationship between items 12 and 14.

20   As illustrated in Fig. 1, items 12 and 14 consist of
numerical digits, the arrangement of which has a feature
to facilitate the number being humanly read and keyed or
spoken into a telecommunications device 26, this feature
comprising wider spaces 28 between certain successive

25   digits of items 12 and 14. Card 10 is substantially the
size of a standard credit card, i.e. approximately 8½ x
5½ centimetres. The card 10 is or includes a single

member bearing both of said items 12, 14 and instructions

30 printed thereon for use of the card. Alternatively or

in addition, the detachable envelope 20 may bear

instructions 30 for use of the card 10 and can be removed

5   by the user to display item 14.

Computer 20 operates as described and verifies the

mutual relationship between items 12 and 14 and, in

consequence of such verification, issues an authorisation

signal 32. Upon the computer receiving said items 12 and

10   14 the first time from the user (i.e. after the card has

left the manufacturer and, if appropriate, after the

relevant batch of cards has been indicated to the ·

computer as "on sale"), the computer responds by

verifying that the items 12 and 14 are mutually related

15   as required and then operates in respect of a store field

412 corresponding to item 12 to enable itself in respect

of field 412. The field 412 may in fact be identical

with field 212 and the enabling may simply be the

switching of a bit 512 stored in field 212 that will

20   indicate to the computer for any other purposes that

field 212 correspond to a card 10 that has started to be

used. The computer will usually set up, concomitantly

with this enabling, a stored value 612, e.g. in field

412, which value corresponds to the facilities available.

25   The computer will then change this value 612 upon each

subsequent reception by computer 24 of the two items of

information 12, 14. The computer may do this enabling on

a first reception of items 12, 14 and not issue

authorisation signal 32 until second and subsequent

receptions of items 12 and 14 or may issue authorisation

signal 32 upon the first as well as subsequent receptions

5   of items 12 and 14. Depending upon which of these

methods is employed, the stored value may already

incorporate an allowance for the first such reception.

In any case, for each said subsequent reception, said

stored value 612 is changed by the computer 24 towards a

10   predetermined value (e.g. a decrease towards zero) in

correspondence to the facilities provided, usually

corresponding to the purchase price of the card being

used up. Upon said stored value 612 reaching said

predetermined value, the computer 24 issues a signal

15   disenabling it in respect of store field 412, e.g. by

reversing bit 512 and from that time discontinues issue

of said authorisation signal 32.

The authorisation signal 32 has the following three

effects (a) it operates a process indicated symbolically

20   by reference 34 which can be subject to selection by the

user by choice of the card 10 or otherwise, (b) it

transmits to the user a signal 36 indicative of a value

of the process 34, which may be a computer-generated

voice announcing the identity of the process and the

25   value, e.g. "Order confirmed for one lawnmower at a cost

of £50 to be delivered to Mr (name) of (address)" and (c)

changes the stored value 612 correspondingly as

aforesaid.

The card, computer and system described enable the cards to be manufactured cheaply, to be used with a reasonable degree of security that is at once apparent to

5   the purchaser and to be disabled if the vendor is able to report the serial numbers of stolen ones to the manufacturer or provider of them. There is also enabled or provided a new way of obtaining goods and/or services through the purchase of a pre-payment card. The same

10 serial number 12 can be re-used if the related item 14 can be changed to a different relationship e.g. if cards are valid only for one year (in which case the disenabling may be carried out after 15 complete months from manufacture, thus allowing time for sale, and the

15 numbers 12 can be re-used after 18 months).

Example of use

(i) A person wishes to make a telephone call and pay for it by using a card embodying the invention.

(ii) The person buys the card from an outlet and

20 makes the encrypted number visible (by scratching off an opaque coating or removing an adhesive label).

(iii) The person lifts the handset of the phone and dials a number to access the authorisation computer.

(iv) The computer asks the caller to enter the

25 serial number followed by the encrypted number.

(v) The caller enters both numbers by pressing keys on the telephone keypad.

- 17 -

(vi) The computer verifies that a predetermined relationship exists between the two numbers and retrieves from the store field relating to that card the number of "credit units" available for that card.

5   (vii) The computer announces to the caller how many units are available for that card and asks the caller to enter the telephone number they wish to call.

(viii) A connection is made between the caller and the called party.

10   (ix) During the time of the connection, the value in the store field relating to that card is reduced at a certain rate corresponding to the "call units" being used.

(x) If the store field reaches zero during the
15 conversation, the called party is put on hold and the caller is invited to begin the process again at step (iv) with another card.

(xi) If the call terminates and there are still "credit units" available for that card, the card may be
20 re-used until all units have been used up.

(xii) When all "credit units" have been used for a given card, the card may be disposed of. Any attempt to re-use the card will result in the caller being informed that the card has no value and must be discarded.

25   If the card is stolen at any stage between the point of manufacture and the point of sale, and if the number of the stolen card is known, then all the store fields

corresponding to the stolen card can either be set to zero or set to a special pre-determined value which indicates that the card has been stolen, and possible some appropriate action may be taken such as calling the

5 police.

When being used as a phonecard, this embodiment of the invention has the advantage over existing phonecards that the phones do not need to include special reading devices.

10 Cards embodying the invention can similarly be used to purchase pay-per-view television events. Prior to the event starting, the prospective watcher calls the authorisation computer and enters the serial number and encrypted number in the manner as above. Upon acceptance

15 of the card, an authorisation signal is generated which allows the caller to watch a specific event. In such a scenario, the card may have multiple "credit units" and each event may command a different number of units. Alternatively, cards may be produced which can only be

20 used once, to enable reception of one special televised event.

Cards embodying the invention can similarly be used to purchase telephone-based services. Such services might include recorded information about the weather,

25 horoscopes, current share values, traffic information or more advanced "interactive" information such as role-playing games, expert systems and other such services.

In such a scenario, the computer generating the authorisation signal and the computer providing the information may be one and the same machine.

A card embodying the invention can also be used as a promotional item, e.g. given away to encourage people to buy further goods, services or even such cards.

Cards embodying the invention are as secure as the encryption or other method used to generate the hidden number. The hidden number should also be of such a length as to reduce the possibility of accessing a service or receiving goods by guessing the hidden number if the card has not been properly purchased and the unauthorised user does not remove the means hiding that number. However, an encrypted number that is too long may be more cumbersome and inconvenient to the user than a shorter one.

At the point of purchase, the hidden number must be totally hidden, and once the opaque cover is removed it must not be possible to replace the covering in such a manner that it looks as though the cover has never been removed. This could be achieved by (a) covering the encrypted number in a material which must be "scratched off", (b) covering the encrypted number with an adhesive label which permanently marks or discolours when bent or removed, or (c) placing the card in a carrier or envelope which once opened cannot be closed without it being evident that the carrier or envelope has been opened.

The term "number" used above may be or include any series of alphabetic characters, digits, symbols or shapes. Many variations on the foregoing will be apparent to people skilled in the relevant arts and all

5   such variations are intended to be included in the present description and claims.

CLAIMS

1. A card or like information store having two
items of information, one initially readable and the
other initially unreadable, the store being provided with
5 means operable by the user in an irreversible manner to
render said other item readable, the two items being
related to each other in a verifiable way.

2. A store as claimed in Claim 1, in which the two
items are both adapted to be humanly readable.

10 3. A store as claimed in Claim 2, in which said one
item is initially visible to the eye and said other item
is initially hidden from view.

4. A store as claimed in Claim 3, in which the
hidden item is hidden by means of a coating adapted to be
15 scratched away by the user.

5. A store as claimed in Claim 3, in which the
hidden item is hidden by means of an envelope adapted to
be removed by the user and arranged to permit the other
item to be seen before such removal.

20 6. A store as claimed in any preceding Claim, in
which the items of information are adapted to be humanly
readable by touch.

7. A store as claimed in any preceding Claim, in
which the two items are mutually related by respective
25 corresponding information being held in mutually related
store fields available to a computer.

8. A store as claimed in any preceding Claim, in

which the two items are mutually related by an
arithmetical relationship.

9.   A store as claimed in any preceding Claim, in
which the items are related by a non-arithmetical
computational relationship.

10.   A store as claimed in any preceding Claim, in
which the items consist of numerical digits, the
arrangement of which has a feature to facilitate the
number being read and keyed into a touch pad or spoken
into a telephone.

11.   A store as claimed in Claim 10, in which the
said feature comprises at least one variation in spacing
between certain successive digits.

12.   A store as claimed in any preceding Claim, which
is substantially the size of a standard credit card, i.e.
approximately 8½ x 5½ centimetres.

13.   A store as claimed in any preceding Claim,
comprising instructions for use thereof.

14.   A store as claimed in Claim 13, in which the
store comprises a member bearing both of said items and
said instructions.

15.   A store as claimed in any preceding Claim,
comprising a detachable member bearing instructions for
use thereof.

16.   A store as claimed in Claim 15, in which said
detachable member comprises an envelope adapted to be
removed by the user.

17. A card or like information store, substantially according to any example hereinbefore described or illustrated in the accompanying drawings.

18. A system comprising a store as claimed in any one of Claims 1 to 17 and a computer adapted to verify the mutual relationship between the two items of information, and in consequence of such verification to issue an authorisation signal.

19. A system as claimed in Claim 18, in which the computer is adapted to verify the relationship or part thereof by a computation performed on at least one of the items of information.

20. A system as claimed in Claim 18 or 19, in which the computer is adapted to verify the relationship or part thereof by comparing the items with respective corresponding information held in mutually related store fields available to the computer.

21. A system as claimed in any one of Claims 18 to 20, in which the computer has a store field available to it corresponding to said one item of information and is adapted to be responsive to receiving initially at least this item of information or information derived therefrom to enable the computer in respect of this store field.

22. A system as claimed in Claim 21, in which the computer is adapted to set up concomitantly with the enabling a stored value and to change this value upon at least each subsequent reception by the computer of the

two items of information or information derived

therefrom.

23.   A system as claimed in Claim 22, in which the

computer is adapted to issue an authorisation signal on

5   the occasion of each such change or at least upon each

said subsequent reception.

24.   A system as claimed in Claim 23, in which the

computer is adapted to cause directly or indirectly each

such change of said stored value to be a change towards a

10   predetermined value (e.g. decrease towards zero) and

adapted upon said stored value reaching said

predetermined value to disenable the computer in respect

of the store field related to the enabling and

discontinue issue of said authorisation signal.

15   25.   A system as claimed in Claim 23 or 24, adapted

for the authorisation signal to have the following

effects, (a) to operate a process subject to selection be

the user, by choice of the store or otherwise, (b) to

transmit a signal indicative of a value of the process,

20   which value may depend upon the occurrence, quantity,

time or otherwise of such process, and (c) to change the

stored value.

26.   A system comprising an information store and a

computer and substantially according to any example

25   hereinbefore described or illustrated in the accompanying

drawings.

27.   A computer adapted to co-operate with a store as

claimed in any one of Claims 1 to 17, which computer is

adapted to verify a predetermined mutual relationship

between two predetermined items of information such as

those of a said store, and in consequence of such

5   verification to issue an authorisation signal, and has a

store field available to it corresponding to one of said

two items and is adapted to be responsive to receiving

initially at least this item of information of

information derived therefrom to enable the computer in

10   respect of this store field.

28.   A computer as claimed in Claim 27, which is

adapted to set up concomitantly with the enabling a

stored value and to change this value upon at least each

subsequent reception by the computer of the two items of

15   information or information derived therefrom.

29.   A computer as claimed in Claim 28, which is

adapted to issue an authorisation signal on the occasion

of each such change or at least upon each said subsequent

reception.

20   30.   A computer as claimed in Claim 29, adapted to

cause directly or indirectly each such change of said

stored value to be a change towards a predetermined value

(e.g. decrease towards zero) and adapted upon said stored

value reaching said predetermined value to disenable the

25   computer in respect of the field related to the enabling

and discontinue issue of said authorisation signal.

31.   A computer as claimed in Claim 29 or 30, adapted

for the authorisation signal to have the following

effects, (a) to operate a process subject to selection by

the user, by choice of the store or otherwise, (b) to

transmit a signal indicative of a value of the process,

5   which value may depend upon the occurrence, quantity,

time or otherwise of such process, and (c) to change the

stored value.

32.   A computer substantially according to any

example hereinbefore described or illustrated in the

10   accompanying drawings.

33.   Means adapted to co-operate with a computer to

program the computer to act as a computer according to

any one of Claims 27 to 32.

Patents Act 1977 Examiner's report to the Comptroller under Section 17 (The Search Report)	Application number 9102012.3

Relevant Technical fields	Search Examiner
(i) UK Cl (Edition K) B6A (AK,AL,ATC) (ii) Int Cl (Edition 5) B42D	S WALLER
Databases (see over) (i) UK Patent Office (ii)	Date of Search 10.09.91

Documents considered relevant following a search in respect of claims   1-26

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	US 4903991 (R F WRIGHT) see column 3 line 59 - column 4 line 3	1,2,3
X	US 3950013 (D P TAGLIAFERRI) see abstract	1,2,3
X	US 3829133 (SMAGALA-ROMANOFF) see column 2 lines 31-56	1,2,3,4

Category	Identity of document and rel vant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one   r more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as   utlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).

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